



# **21st Century Readiness for Every Student**

**Upper Arlington School District  
Professional Development Day  
October 18, 2010**



**Ken Kay, President**



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# Overview

- Our country is competing in a global innovation economy.
- Fusing the 3Rs with the 4Cs is a national imperative.
- There are 7 key steps to getting started.



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# Global Innovation Economy

**OUR COUNTRY IS COMPETING IN  
A GLOBAL ECONOMY.**



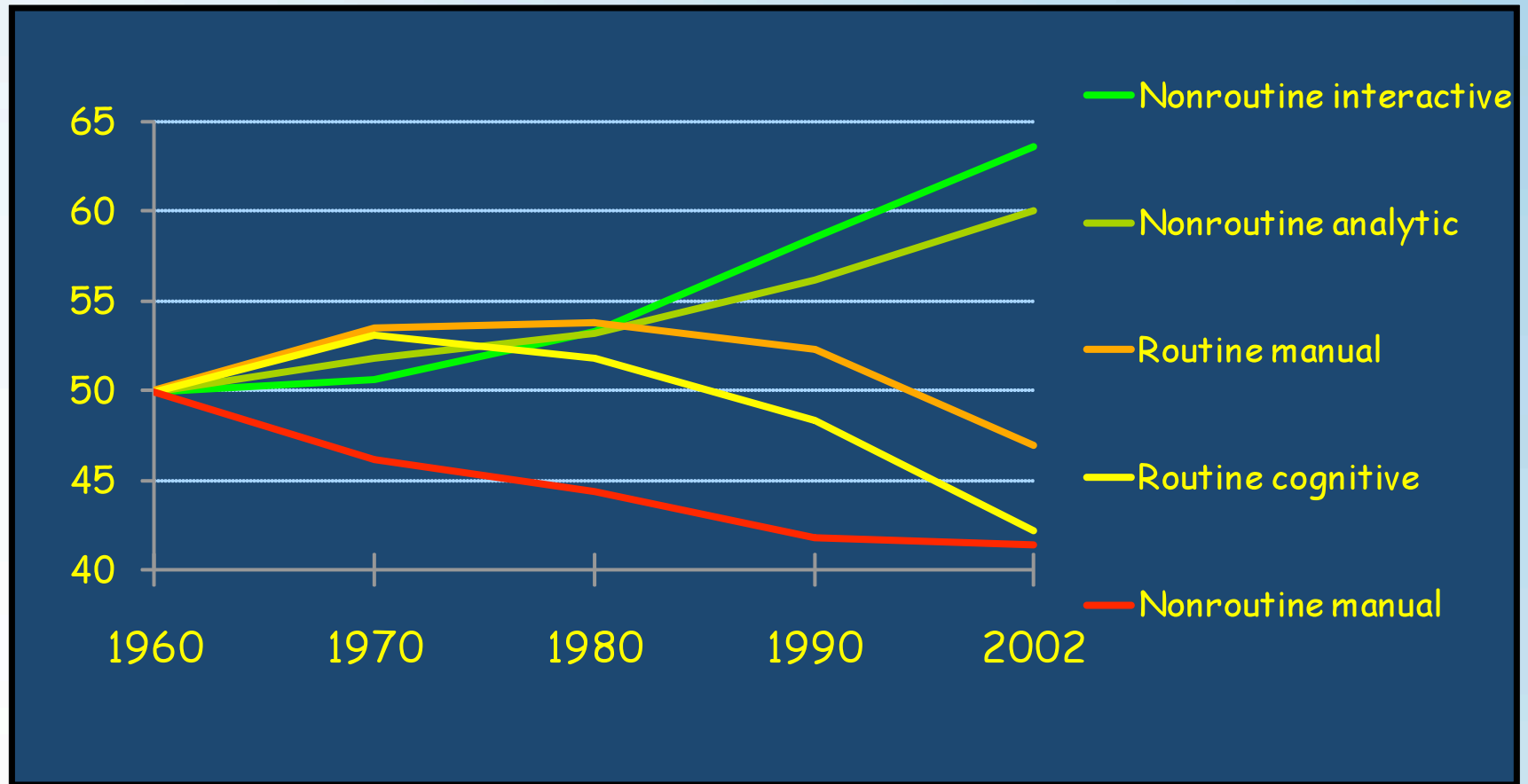
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# Global Innovation Economy

Economy-wide measures of routine and non-routine task input (US)

Mean task input as percentiles of the 1960 task distribution



(Levy and Murnane)



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## 2010 Critical Skills Survey

American Management Association, in conjunction with P21, surveyed 2,115 managers and other executives about the needs of the 21st century workforce.



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# How are the 4Cs recognized within organizations?

*Has your organization identified these skills as priorities for employee development, talent management, and succession planning?*

<b>Skill</b>	<b>Agree/ Strongly Agree</b>
Critical thinking	73.3%
Communication skills	79.2%
Collaboration/team building	72.3%
Creativity and innovation	66.6%

*Source: AMA/P21 2010 Critical Skills Survey, released April 2010*





# How are the 4Cs recognized within organizations?

*Has your organization measured these skills and competencies during annual performance reviews?*

<b>Skill</b>	<b>Agree/ Strongly Agree</b>
Critical thinking	72.4%
Communication skills	80.4%
Collaboration/team building	71.2%
Creativity and innovation	57.3%

*Source: AMA/P21 2010 Critical Skills Survey, released April 2010*



## How are the 4Cs recognized within organizations?

*Has your organization made an effort to assess these skills and competencies when hiring new employees?*

<b>Skill</b>	<b>Agree/ Strongly Agree</b>
Critical thinking	75.7%
Communication skills	80.7%
Collaboration/team building	62.6%
Creativity and innovation	60.1%

*Source: AMA/P21 2010 Critical Skills Survey, released April 2010*





# What has changed in business today?

*How do you believe your organization will view these skills and competencies in the next 3-5 years?*

They will become less important	0.6%
They will remain the same	22.5%
They will become more important	75.7%
No opinion	1.1%

*Source: AMA/P21 2010 Critical Skills Survey, released April 2010*



# The 3Rs and the 4Cs

**WE MUST FUSE THE 3Rs  
WITH THE 4Cs.**



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# P21 Members

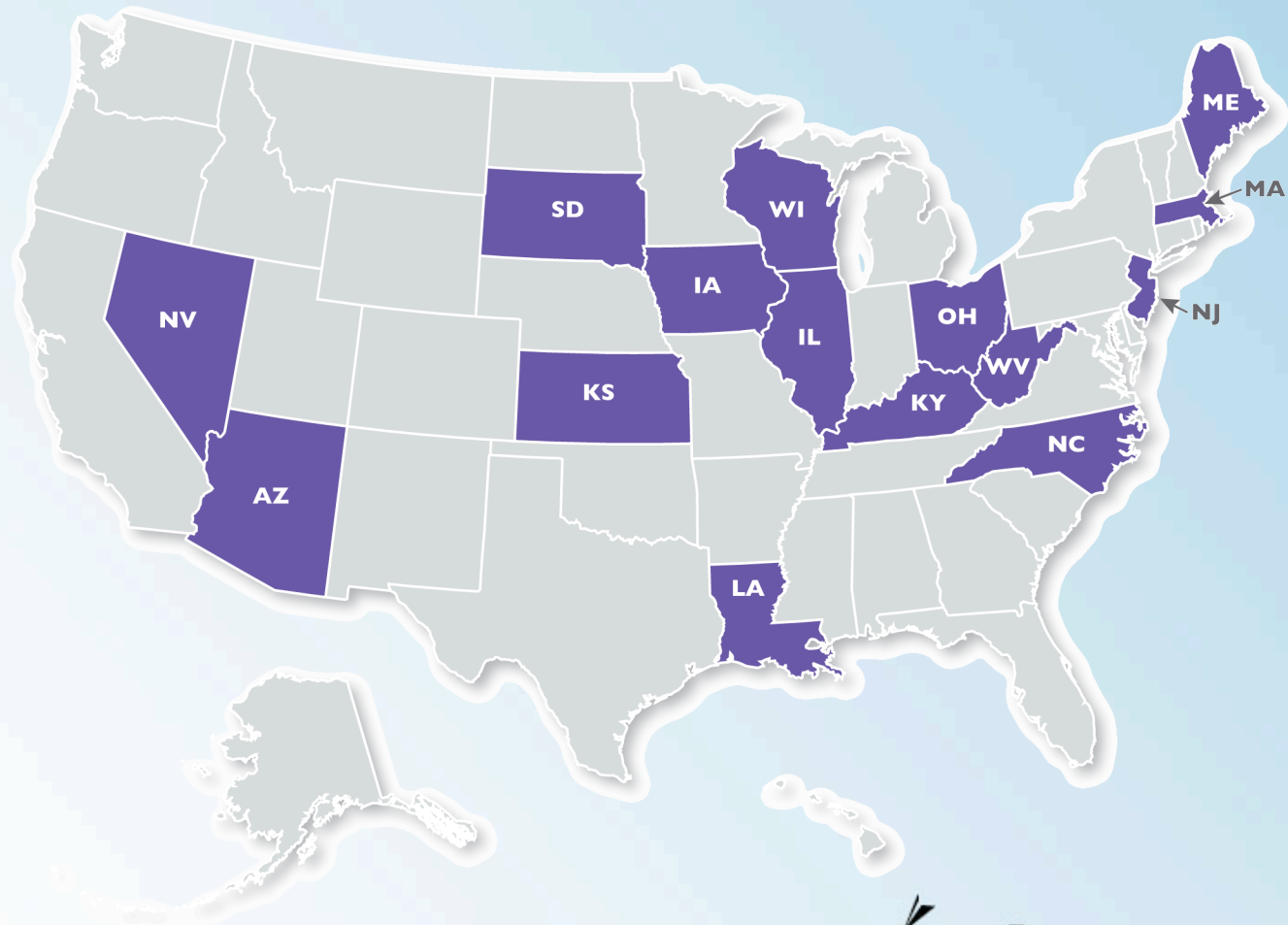




# P21 State Leadership Initiative

## Current State Partners

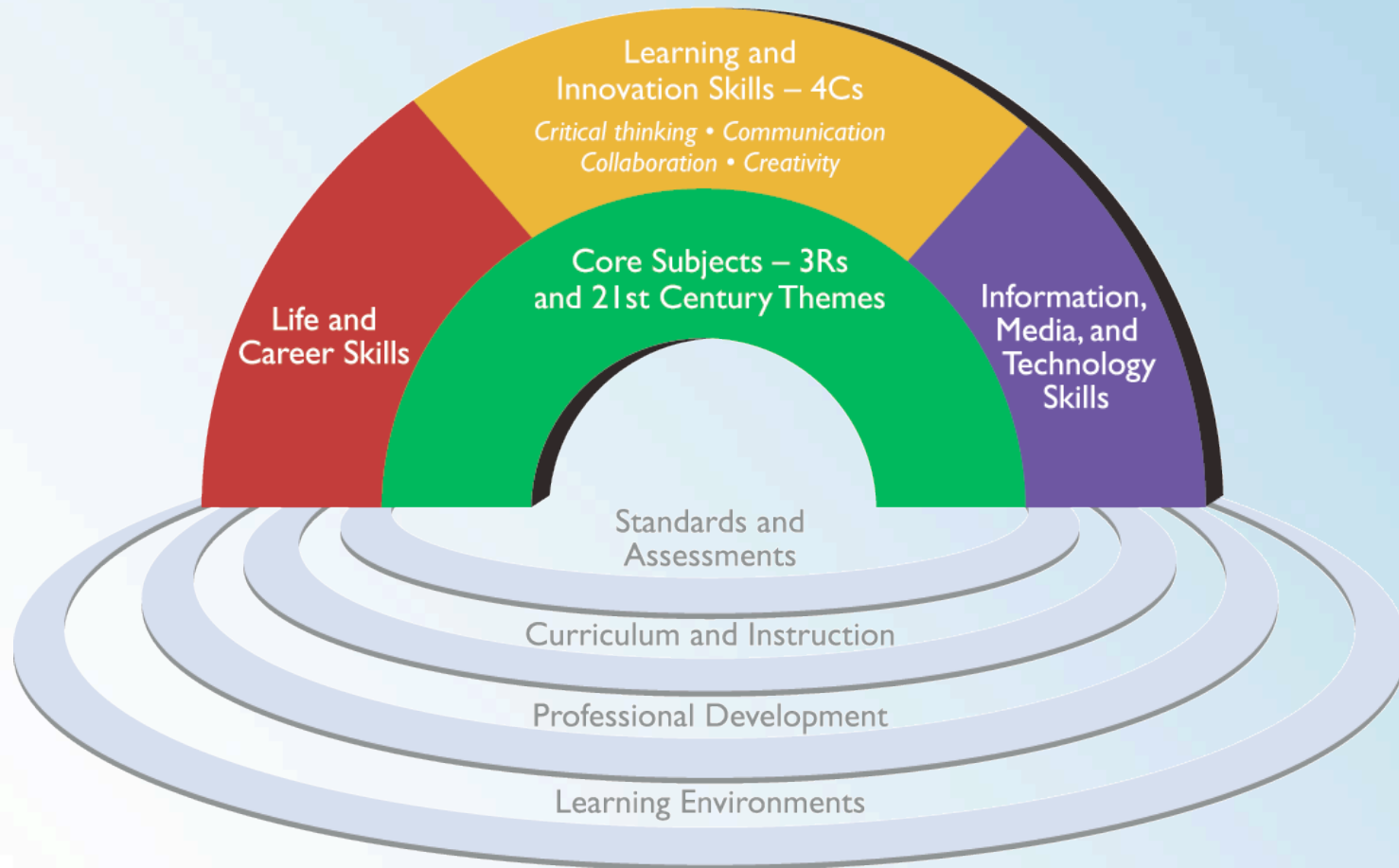
- Arizona
- Illinois
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Massachusetts
- Nevada
- New Jersey
- North Carolina
- Ohio
- South Dakota
- West Virginia
- Wisconsin



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## 21st Century Student Outcomes and Support Systems



[www.p21.org](http://www.p21.org)



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# The 3Rs and the 4Cs



**Fusing  
the 3Rs  
with the  
4Cs**



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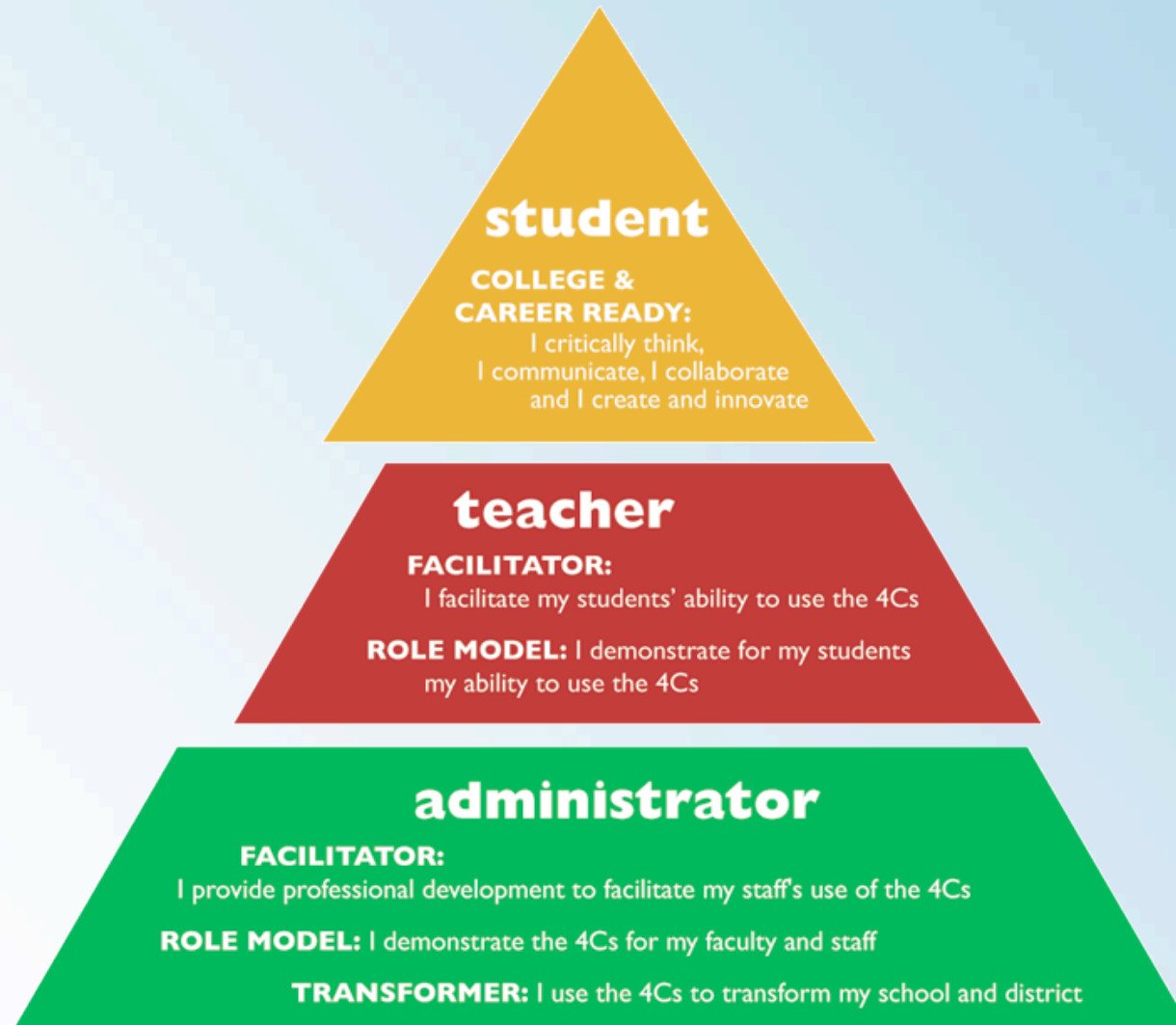






# The 4Cs and 21st Century Education

(The 4Cs are Critical Thinking, Communication, Collaboration, & Creativity)



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# 21st Century Skills Maps



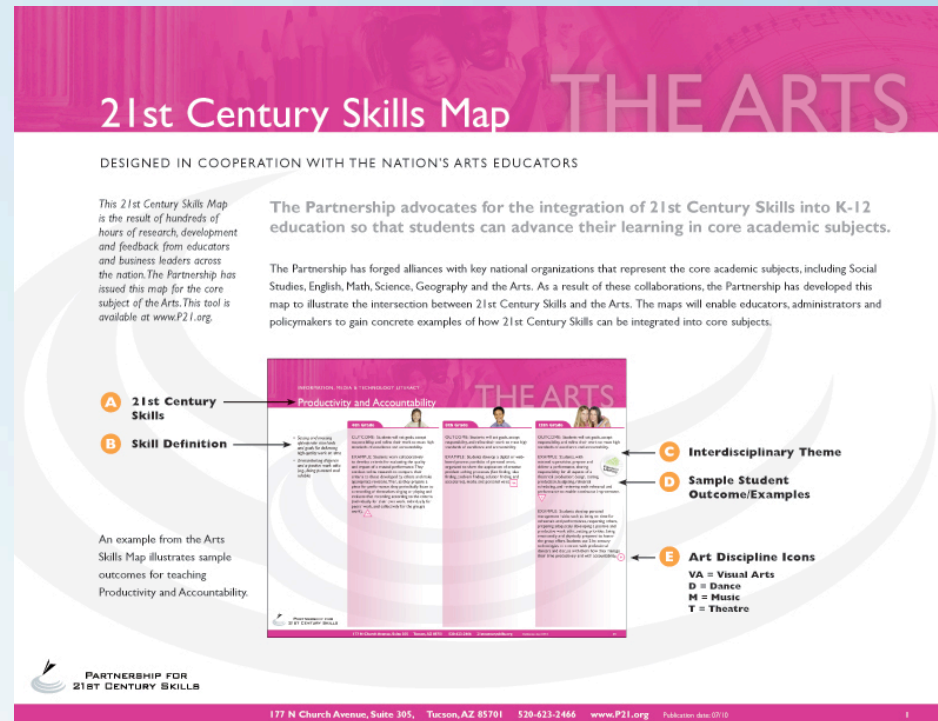
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# 21st Century Skills Maps

## Raise 21<sup>st</sup> Century Skills Awareness:

- Social Studies
- English
- Science
- Geography
- Arts
- World Languages (2011)





# Critical Thinking and Problem Solving



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# Arts Content Map

## **Critical Thinking and Problem Solving**

Outcome: Students use various types of reasoning to think and reflect critically and solve problems in both conventional and innovative ways.



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# Arts Content Map

## Critical Thinking and Problem Solving

Example (12<sup>th</sup> grade visual arts): Students view and discuss single or multiple works of art created by themselves and their peers. Students use mutually agreed upon criteria (elements and principals of art and design, subject matter, technique, style, etc.) to describe, analyze, interpret, and make informed judgments about the art works.



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# The English Map in Action:

## Critical Thinking and Problem Solving

- 8<sup>th</sup> Grade Outcome: Frame, analyze and synthesize information in order to solve problems and answer questions.
- EXAMPLE: After writing an informative or persuasive piece, the student creates a “word cloud” of the writing using a tool such as wordle.com which represents the frequency of word use: the more frequent the word, the larger it is displayed. Students read their selection aloud with the word cloud projected on a screen. In groups, students analyze the visual representation and evaluate the match between the prominent words and the intention of the writer.





# Science Map and Critical Thinking

**Outcome:** 4<sup>th</sup> grade students construct their own scientific understanding and develop their scientific process skills by asking scientific questions, designing and conducting investigations, constructing explanations from their observations, and discussing their explanations with others.



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# Science Map and Critical Thinking

**Example:** 4<sup>th</sup> grade students plan and conduct experiments to explore the properties (e.g., absorbency, insulation, durability) of various natural and human-designed fabrics and record their findings into a shared class database, wiki, or digital lab notebook. They then use their data to design a suit of clothing for use in a high-performance activity, such as working outdoors in polar regions or competing as an Olympic athlete. Students share design choices with their peers in the form of an advertisement they create to market the product.





# Geography and Critical Thinking

## **Outcome (12<sup>th</sup> Grade):**

- Frames, analyzes, and synthesizes info in order to solve problems and answer questions

## **Example (12<sup>th</sup> Grade):**

- Students use remotely sensed images and thematic maps to determine consequences of building in environmentally hazardous areas such as in flood plains or along fault lines.  
(Possible case study: New Orleans)





# World Languages and Critical Thinking

## Critical Thinking and Problem Solving

- Outcome: Students as inquirers frame, analyze, and synthesize information as well as negotiate meaning across language and culture in order to explore problems and issues from different perspectives.



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# World Languages and Critical Thinking

## Example from the Intermediate Proficiency Range

- Students explore an environmental issue in a target language country and compare it with the same issue in the U.S. and propose solutions.







# **7 Steps to begin a 21st century education initiative in your school or district.**



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# 7 Steps to begin...

1. Adopt a vision based on 21st century student outcomes.



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# 7 Steps to begin...

## 2. Create a community consensus:

- Form an advisory board;
- Get community consensus;
- Have your board make the new framework official policy.
- Collect best practices in your school or district.
- Broaden the focus of special and gifted and CTE.
- Have your teachers create the definitions and rubrics.



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# Leading Examples

## Leading Districts:

- Catalina Foothills School District (AZ)
- Chesterfield County (VA) Public Schools
- Tahoma (WA) School District
- Virginia Beach School District
- Upper Arlington (OH) City School District

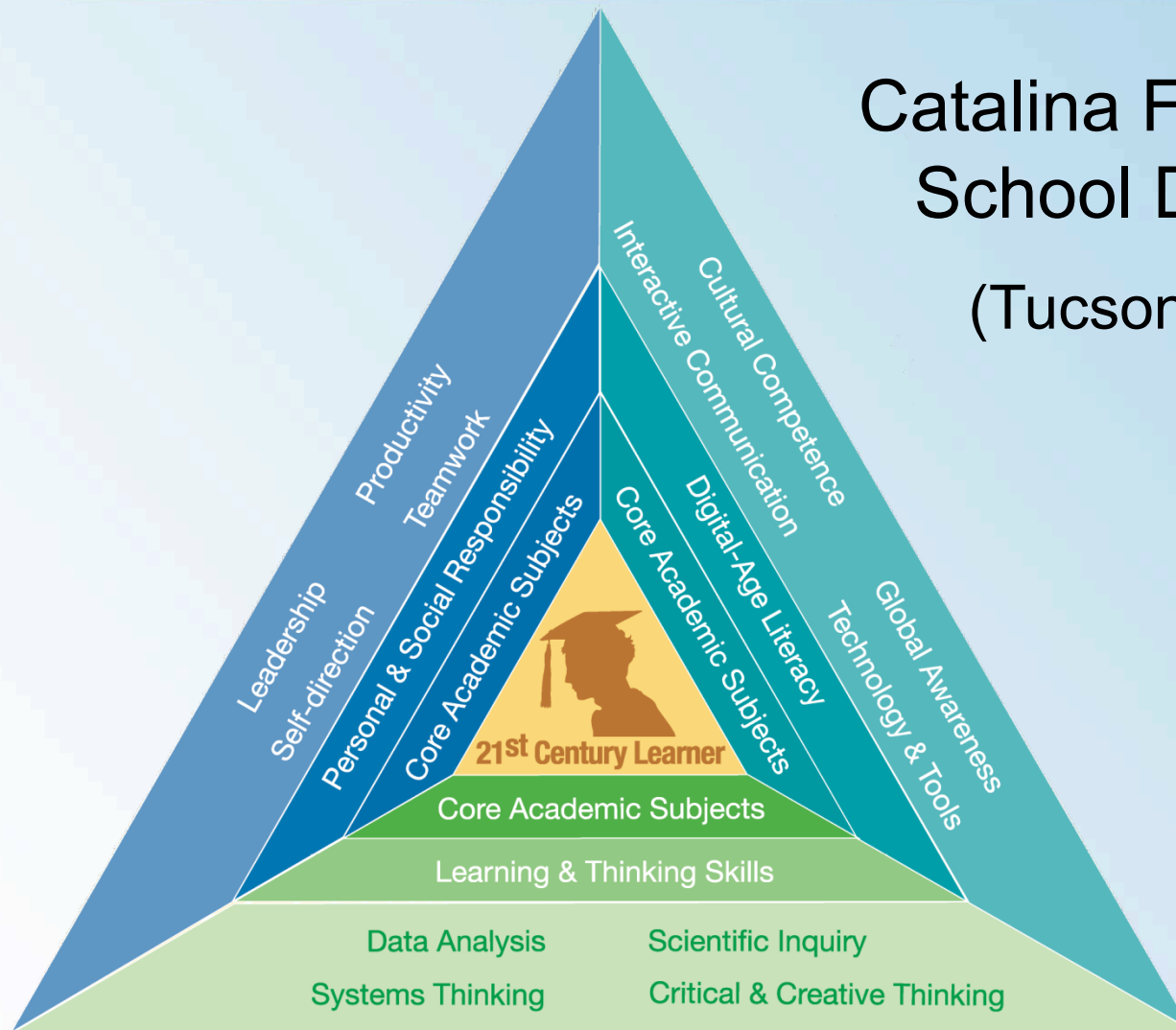


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# Leading Examples

## Catalina Foothills School District (Tucson, AZ)



[www.cfsd16.org](http://www.cfsd16.org)



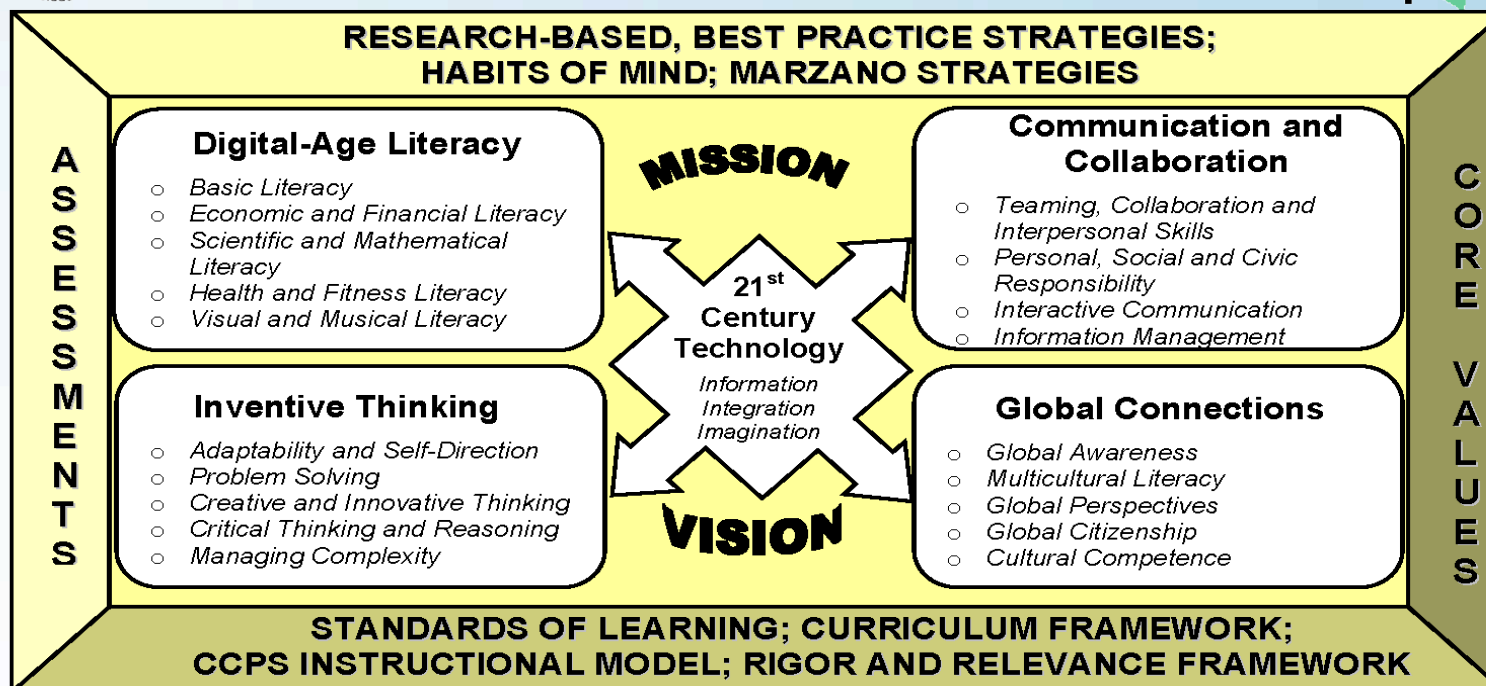
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# Leading Examples



## CHESTERFIELD COUNTY PUBLIC SCHOOLS 21<sup>ST</sup> CENTURY KNOWLEDGE AND SKILLS MODEL FOR SELF-DIRECTED LEARNERS



### CCPS Mission Statement

The mission of the CCPS is to work in partnership with students, families and the community to ensure that each student acquires the knowledge, skills and core values necessary to achieve personal success and to enrich the community.

### CCPS Vision Statement

In 2012, we envision that every Chesterfield school will be a thriving, dynamic and inspiring educational environment that produces self-directed learners and stimulates citizens of all ages to trust in, invest in, and benefit from public education.

May 2009



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# Leading Examples

Quality learning every day, in every classroom, for every child

**TAHOMA**  
SCHOOL DISTRICT NO. 409

## Outcomes and Indicators

Our mission is to develop a learning community where all students, staff and patrons continually teach and learn

<b>Self-Directed Learners</b> <ul style="list-style-type: none"> <li>■ Set goals</li> <li>■ Show persistence</li> <li>■ Make effective decisions</li> <li>■ Evaluate work</li> <li>■ Use time effectively</li> <li>■ Strive for improvement</li> </ul>	<b>Collaborative Workers</b> <ul style="list-style-type: none"> <li>■ Contribute to shared vision</li> <li>■ Demonstrate flexibility</li> <li>■ Show empathy and respect</li> <li>■ Listen actively</li> <li>■ Are accountable</li> <li>■ Build on other people's thinking</li> </ul>	<b>Effective Communicators</b> <ul style="list-style-type: none"> <li>■ Communicate with clarity and precision</li> <li>■ Deliver information effectively and in multiple formats</li> <li>■ Interact with globally diverse audiences</li> <li>■ Listen, interpret and evaluate</li> </ul>
<b>Community Contributors</b> <ul style="list-style-type: none"> <li>■ Consider global perspectives</li> <li>■ Demonstrate personal, social and civic responsibility</li> <li>■ Respect and value diversity</li> <li>■ Enhance the environment</li> <li>■ Engage in community service</li> </ul>	<b>Quality Producers</b> <ul style="list-style-type: none"> <li>■ Develop and/or utilize criteria</li> <li>■ Aspire to exceed expectations</li> <li>■ Skillfully use tools, resources and technology</li> <li>■ Demonstrate accuracy and precision</li> <li>■ Create aesthetically pleasing work</li> </ul>	<b>Complex Thinkers</b> <ul style="list-style-type: none"> <li>■ Imagine, create and innovate</li> <li>■ Recognize and appreciate humor</li> <li>■ Gather, filter and synthesize information</li> <li>■ Access multiple problem-solving strategies</li> <li>■ Reflect on and apply past learning to new experiences</li> <li>■ Generate questions to deepen understanding</li> <li>■ Explore and take risks</li> </ul>

Our mission is to develop a learning community where all students, staff and patrons continually teach and learn

TSD 2007

Quality learning every day, in every classroom, for every child

## Tahoma School District (Maple Valley, WA)

[www.tahomasd.us](http://www.tahomasd.us)



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# Virginia Beach City Public Schools Compass to 2015

[www.vbschools.com](http://www.vbschools.com)



## **Critical and Creative Thinkers, Innovators, and Problem Solvers**

*Critical Thinking ♦ Creative/Innovative Thinking ♦ Problem Solving*



## **Effective Communicators and Collaborators**

*Information Literacy ♦ Listening ♦ Collaboration ♦ Communication*



## **Globally Aware, Independent, Responsible Learners and Citizens**

*Social Responsibility ♦ Sustainability ♦ Interdependence ♦  
Health Literacy*



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# Leading Examples



Upper Arlington  
City School District  
(Upper Arlington, Ohio)

[www.uaschools.org](http://www.uaschools.org)



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# 7 Steps to begin...

## 3. Align your system:

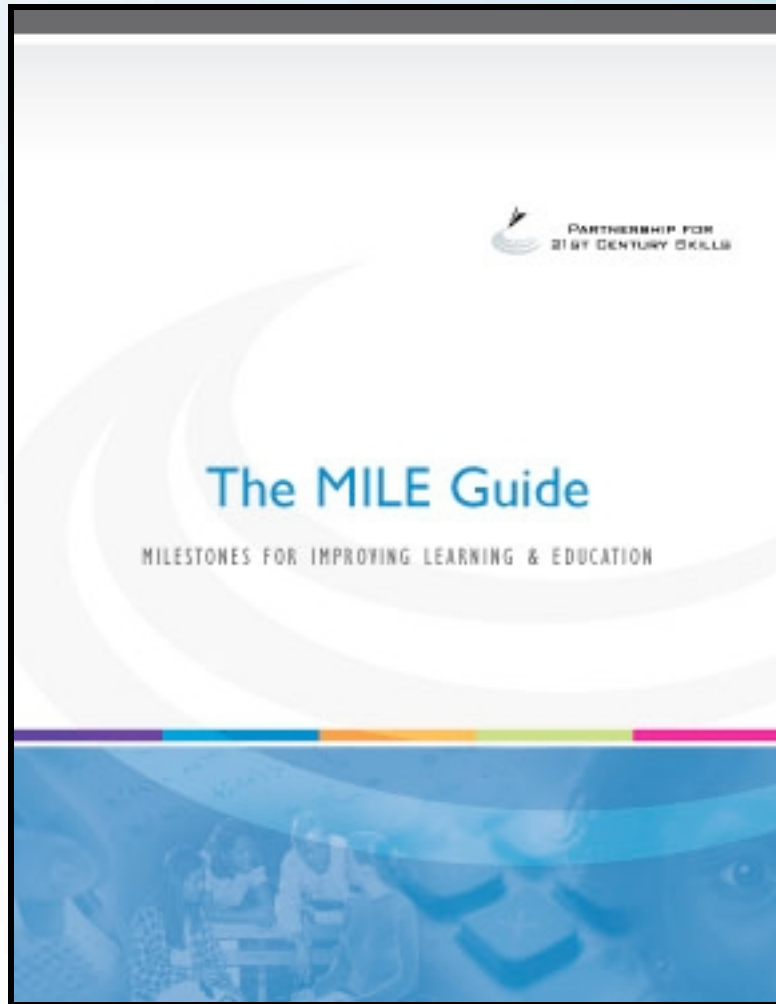
- Integrate the whole system;
- Use the MILE Guide;
- Drive PD, curriculum and instruction and assessment toward your student outcomes.



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# 7 Steps to begin...



## The MILE Guide and The online MILE Guide

P21's self-  
assessment tool  
for schools and  
districts

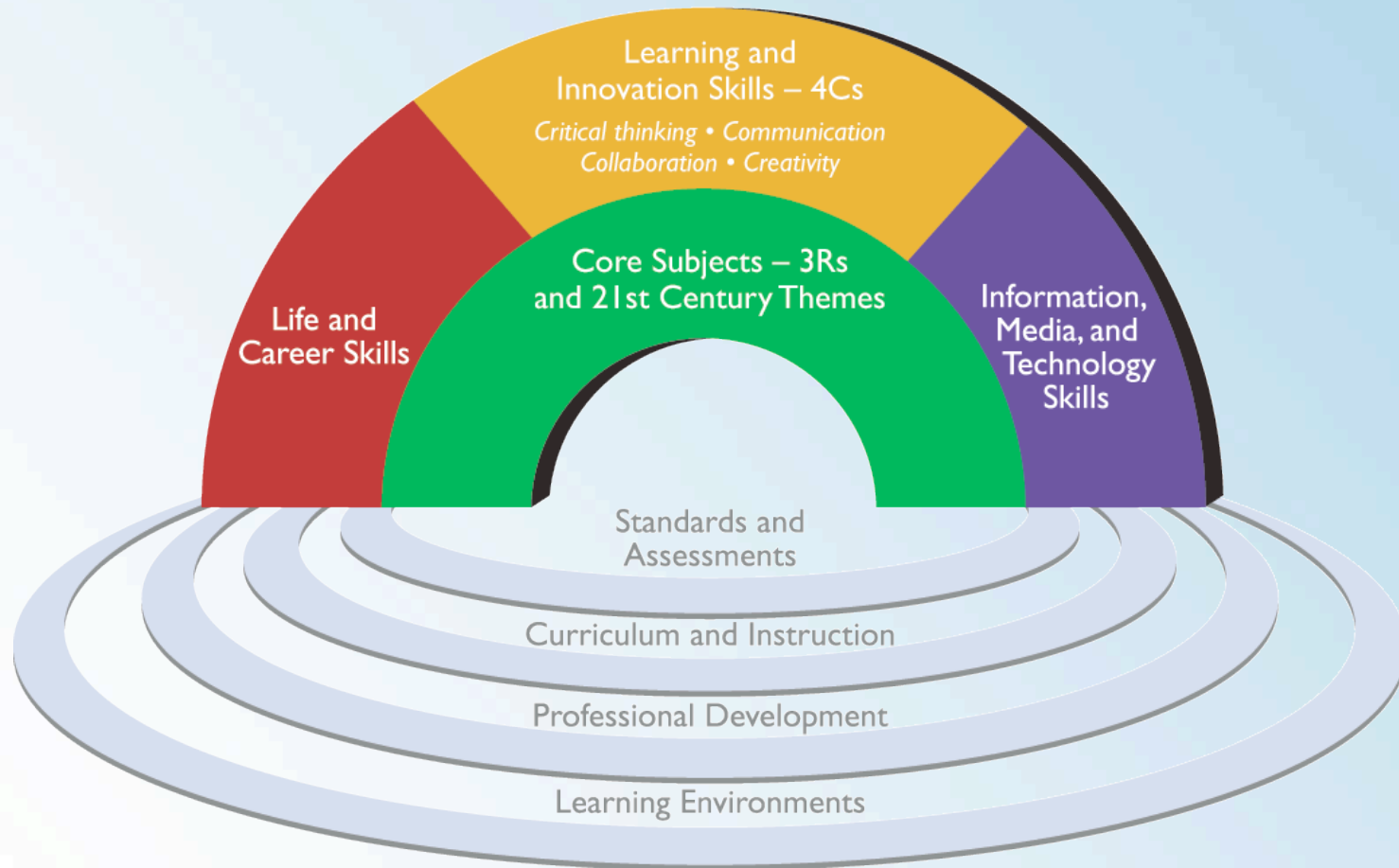
[www.P21.org/mileguide](http://www.P21.org/mileguide)





# 7 Steps to begin...

## 21st Century Student Outcomes and Support Systems



[www.p21.org](http://www.p21.org)



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# 7 Steps to begin...

## 4. Build professional capacity:

- Prioritize the skills;
- Identify your P.D. resources;
- Utilize 21st century skill coaches;
- Create/utilize Professional Learning Communities;
- Utilize peer coaches.



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## 7 Steps to begin...

### 5. Support the teacher in the classroom:

- Video 21 ([www.p21.org](http://www.p21.org))
- Teach 21 ([www.wvde.state.wv.us/teach21](http://www.wvde.state.wv.us/teach21))



Video21



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## 6. Focus on assessment:

- CWRA ([www.cae.org](http://www.cae.org))
- New Tech model ([www.newtechnetwork.org](http://www.newtechnetwork.org))
- N.C. Genetics Assessment
- Portfolio of the 4 Cs ([www.envisionschools.org](http://www.envisionschools.org))
- Senior capstone projects



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# 7 Steps to begin...

## 7. Continuously Improve and Innovate:

- Create a continuous improvement culture;
- Create accountability for things that really matter (21st century accountability);
- Model innovation;
- Think outside:
  - The classroom;
  - 9:00 – 3 p.m.;
  - Your campus;
  - K-12.



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# Conclusion

## Upper Arlington's Great Progress

- Advisory Committee
- Model
- Rubrics and PD focus for complex thinking
- 21st Century Skill Coaches
- Use of PLCs
- CWRA to 100 freshmen and seniors
- Senior capstone projects



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## Conclusion

**Q. Is your school/district purposeful and intentional about 21st century outcomes?**



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## Conclusion

**A. Upper Arlington is striving to be a leading state and national example of a 21st century district.**



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## Conclusion

**Q. Are you striving to fuse the  
3 Rs with the 4 Cs?**



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## Conclusion

**Q. Are you personally committed to embedding**

- **Critical Thinking**
- **Communication**
- **Collaboration**
- **Creativity**

**into your classroom?  
into your teaching?  
into your leading?**



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# Contact Us

177 North Church Ave.  
Suite 305  
Tucson, AZ 85701  
(520) 623-2466

[www.21stcenturyskills.org](http://www.21stcenturyskills.org)

Twitter: [kenkayp21](https://twitter.com/kenkayp21)  
Twitter: [P21CentSkills](https://twitter.com/P21CentSkills)

The screenshot shows the homepage of the Partnership for 21st Century Skills website. At the top is a navigation bar with the logo and links: OVERVIEW, TOOLS & RESOURCES, STATE INITIATIVES, EVENTS & NEWS, and ABOUT US. Below the navigation bar is a large banner image featuring a group of diverse students and a teacher. A small Twitter widget is overlaid on the banner, showing a tweet about the P21 MILE Guide. Below the banner is a section titled 'A FRAMEWORK FOR 21ST CENTURY LEARNING' which includes a circular diagram of the framework and a paragraph describing the organization's mission. To the right of this is a 'GET INVOLVED' section with a 'Route 21' logo and links to share resources, subscribe to the newsletter, and download a PDAP Brochure. At the bottom of the page is a footer with the logo and the text 'PARTNERSHIP FOR 21ST CENTURY SKILLS'.

**PARTNERSHIP FOR 21ST CENTURY SKILLS** ▲ OVERVIEW ▲ TOOLS & RESOURCES ▲ STATE INITIATIVES ▲ EVENTS & NEWS ▲ ABOUT US

**P21 on Twitter:**  
Need strategies to ensure 21st century readiness for students? Check out the P21 MILE Guide. <http://www.21stcenturyskills.org/themileguide> (30 minutes ago)

**A FRAMEWORK FOR 21ST CENTURY LEARNING**

The Partnership for 21st Century Skills is a national organization that advocates for 21st century readiness for every student. As the United States continues to compete in a global economy that demands innovation, P21 and its members provide tools and resources to help the U.S. education system keep up by fusing the three Rs and four Cs (critical thinking and problem solving, communication, collaboration, and creativity and innovation). While leading districts and schools are already doing this, P21 advocates for local, state and federal policies that support this approach for every school. [Learn more about the Partnership and the Framework for 21st Century Learning.](#)

**ANNOUNCEMENTS**

[Read the P21 Statement on the U.S. Department of Education's National Educational Technology Plan.](#)

**May 18-20, 2010: Become a Professional Development Affiliate!** Are you a PD expert? Do you want to know how to infuse 21st century skills into your already existing professional development? Do you work with states, schools and districts as they develop their PD strategies? Bring your programs into the 21st century. For more information please download the [PDAP Application](#) and [PDAP Brochure](#).

**Free AMA Webinar, "Essential Skills for the 21st Century"**

**GET INVOLVED**

**Route 21** Share your resources and expertise on Route 21, a one stop shop for information, resources and community. [Go!](#)

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